

9th Class 2018

Math (Science)	Group-I	Paper-I
Time: 20 Minutes	(Objective Type)	Max Marks: 15

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark for that question.

- 1-1- H.C.F of $a^3 + b^3$ and $a^2 - ab + b^2$ is ----:
- (a) $a + b$ (b) $a^2 - ab + b^2$ ✓
(c) $a - b$ (d) $a^2 + b^2$
- 2- If $(x, 0) = (0, y)$, then (x, y) is:
- (a) $(0, 1)$ (b) $(1, 0)$
(c) $(0, 0)$ ✓ (d) $(1, 1)$
- 3- Medians of a triangle are:
- (a) Parallel (b) Equal
(c) Concurrent ✓ (d) Non-concurrent
- 4- The medians of a triangle cut each other in the ratio ----:
- (a) $4 : 1$ (b) $3 : 1$
(c) $2 : 1$ ✓ (d) $1 : 1$
- 5- The bisectors of the angles of a triangle are ----
- (a) Collinear (b) Non-collinear
(c) Non-concurrent (d) Concurrent ✓
- 6- If $X + \begin{bmatrix} -1 & -2 \\ 0 & -1 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, then X is equal to:
- (a) $\begin{bmatrix} 2 & 2 \\ 2 & 0 \end{bmatrix}$ (b) $\begin{bmatrix} 0 & 2 \\ 2 & 2 \end{bmatrix}$
(c) $\begin{bmatrix} 2 & 0 \\ 0 & 2 \end{bmatrix}$ (d) $\begin{bmatrix} 2 & 2 \\ 0 & 2 \end{bmatrix}$ ✓

- 7- The value of $\log \left(\frac{p}{q} \right)$ is ----- :
- (a) $\log p - \log q$ ✓ (b) $\frac{\log p}{\log q}$
(c) $\log p + \log q$ (d) $\log q - \log p$
- 8- Factors of $3x^2 - x - 2$ are ---- :
- (a) $(x + 1), (3x - 2)$ (b) $(x + 1), (3x + 2)$
(c) $(x - 1), (3x - 2)$ (d) $(x - 1), (3x + 2)$ ✓
- 9- Mid-point of the points $(0, 0)$ and $(2, 2)$ is:
- (a) $(1, 1)$ ✓ (b) $(1, 0)$
(c) $(0, 1)$ (d) $(-1, -1)$
- 10- Symbol used for congruent is ----:
- (a) $=$ (b) \cong ✓
(c) \sim (d) \leftrightarrow
- 11- A ray has ----- end points:
- (a) 2 (b) 1 ✓
(c) 3 (d) 4
- 12- Write $4^{2/3}$ with radical sign:
- (a) $\sqrt[3]{4^2}$ ✓ (b) $\sqrt{4^3}$
(c) $\sqrt[2]{4^3}$ (d) $\sqrt{4^6}$
- 13- Triangles on equal bases and of equal altitudes are ---- in area:
- (a) Same (b) Equal ✓
(c) Unequal (d) Similar
- 14- $\frac{1}{a-b} - \frac{1}{a+b}$ is equal to:
- (a) $\frac{2a}{a^2 - b^2}$ (b) $\frac{2b}{a^2 - b^2}$ ✓
(c) $\frac{-2a}{a^2 - b^2}$ (d) $\frac{-2b}{a^2 - b^2}$
- 15- If x is no larger than 10, then ----:
- (a) $x \geq 8$ (b) $x \leq 10$
(c) $x < 10$ ✓ (d) $x > 10$